

## PROYECTO DE INVERSION #330

Installation of an electric power and potassium sulfate generation plant from vinasse treatment.

### Sector

WASTE TREATMENT

### Subsector

OTHER WASTE

### Brief description of the business opportunity

Vinasse, a highly contaminant liquid effluent, generates during the process of bioethanol production from sugar cane. The bioethanol industry does not have a technology to treat vinasse. As a result, the severe problem of water pollution in the basin of the Salí Dulce River remains unsolved. With this in mind, the project owner developed an innovative process that transforms vinasse into water, renewable energy and potassium sulfate using highly-tested technologies in the cellulose industry. In this way, not only will this environmental problem be solved, but also the project will generate three products at competitive costs, which are very demanded by the market. The expected income represents an annual turnover of US\$ 46 million. If operative costs are deducted, fund flows result in an EBITDA of 60%.

### Brief description of the product/service

The project consists in building a vinasse treatment plant with a capacity to generate 100,000 MWh/year of electrical energy from renewable sources and potassium sulfate. In turn, this process will recover water (2,300,000 m<sup>3</sup> water/year) usable for irrigation. This plant will use an innovative process that is patent-protected. The plant's equipment will be supplied by first-line companies, with technologies highly tested in the cellulose industry.

### Brief description of the target market(s) of the product/service

The electricity so generated will be purchased by CAMMESA, a company that manages the wholesale electric market. Currently, Argentina imports energy, so demand is guaranteed. Considering the current rates, U\$S 100/MWh is expected. In terms of potassium sulfate aimed at fertilizer market, Argentina imports almost 10,000 tons/years, so demand is also proven. Both markets show growing demand thanks to the agroindustrial activities growth. Regarding potassium sulfate, it is expected to produce 55,000 tons/year, 10,000 of which will be targeted at the domestic market, with a value of U\$S 700/Tn., generating an exportable balance of 45,000 Tn./year, with international prices at U\$S 630/Tn. The potassium sulfate represents 78% of turnover, and the energy production represents the remaining 22%. Export turnover will represent 62% of the total.

### Brief description of the advantages of the company or cooperative to carry out the investment project

The project owner developed an innovative productive process whose patent is under process in Argentina, Brazil, USA, India and Thailand and has been approved in Colombia. The staff has a long-standing experience in managing environmental remediation projects and boasts over 20 years of experience in investment projects in energy and cellulose industry. Moreover, the project owner has a wide number of contacts, as well as technical guarantees provided by the main international equipment suppliers. Argentina's environmental authorities consider this productive process as the only integral solution (both environmentally-friendly and economical) the pollution caused by vinasse. Additionally, the developed process has had highly positive opinions by the Argentine Ministry of Science, Technology and Productive Innovation.

### Brief description of the context of the investment opportunity

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Bioethanol production should expand in order to guarantee the naphtha hurdle rate. The three products to be supplied by the plant (water, potassium sulfate and electric power) will have a growing demand for the following years. In terms of renewable energy production, Argentina has a very attractive promotion regime (Law No. 26190). Today, Argentina is not self-sufficient in terms of electricity generation). As in the rest of the world, renewable energy projects are one of the top priorities.

### More information about the investment project

**City/Area:** Cercana a Monteros, en el centro de la Provincia., Tucumán, Argentina

**Total amount of the Investment Project: US\$** 140.000.000,00

**Percentage of the investment contributed by the Company or cooperative submitting the project:**  
10% - 25%

**Minimum amount required from investor: US\$** 28.000.000,00

**Payback period:** 5-10 years

**Purpose of the Investment:** New productive unit, Development of new products/services, Breaking into new markets in Argentina, Breaking into new foreign markets

**Destination of the Investment:** Machinery and Equipment, Land and Buildings, Sales and Marketing, Working Capital, Other (specify) - New Productive Unit, Development of new products/services, Access to new markets in Argentina, access to new markets abroad.

**Investment Project's stage of development:** Business plan

**Brief description of the main stages of the project:**

Year	Amount	Destination
1	49.000.000,00	Basic and detailed engineering, land purchase. Advance of the purchase of the main equipment items
2	70.000.000,00	Manufacturing and transportation of electromechanical equipment. Finalization of civil and complementary works.
3	21.000.000,00	Finalization of the work details. Pre-commissioning and start-up.
4		Finalization of the work details. Pre-commissioning and start-up.
Rest		
<b>Total</b>	140.000.000,00	

**Type of public incentives available for the Investment Project:** Tax breaks, Financial facilities, Investment reimbursement

**Type of investor required:** Strategic investor

**Preferred investment mode:** Equity

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### Información de la empresa/cooperativa titular del proyecto de inversión

**Length of time in business:** < 5 years

**Annual sales of the Company/Cooperative (in US\$ millions):** < 2

**Number of employees:** < 50

If you're interested in learning more about this project, send an email to [bapip@mrecic.gov.ar](mailto:bapip@mrecic.gov.ar)